Advanced Certificate in Movement Therapy for Autism

Sensory Integration and Motor Planning

Afferent Pathways – Related terms: Sensory receptors, neural transmission. The routes by which sensory information travels from peripheral receptors to the central nervous system. Example: Tactile signals travel via dorsal column pathways. Application: Assessing afferent integrity helps tailor sensory-integration activities. Challenge: Atypical afferent signaling can obscure motor planning cues in autistic children.

Ayres Sensory Integration – Related terms: Sensory processing, neurodevelopmental theory. A therapeutic approach that uses play-based activities to improve the brain's ability to process and integrate sensory input. Example: Swinging on a therapy swing to enhance vestibular input. Application: Therapists design graded sensory experiences to promote adaptive responses. Challenge: Differentiating between sensory-modulation needs and motor-planning deficits.

Balance Reactions – Related terms: Postural control, anticipatory adjustments. Automatic muscular responses that maintain equilibrium when the body's center of mass shifts. Example: Ankle dorsiflexion when stepping onto an uneven surface. Application: Balance-reaction drills support motor-planning for locomotion. Challenge: Delayed or absent reactions increase fall risk in autism.

Biomechanical Alignment – Related terms: Joint posture, musculoskeletal health. The optimal positioning of skeletal structures to allow efficient movement. Example: Neutral spine during sit-to-stand transitions. Application: Alignment cues are incorporated into movement-therapy cueing. Challenge: Sensory-seeking behaviors may lead to maladaptive postures.

Centro-Cerebellar Circuit – Related terms: Cerebellum, motor coordination. Neural pathways linking the cerebral cortex with the cerebellum that fine-tune movement timing and force. Example: Cortico-ponto-cerebellar loop involved in reaching. Application: Targeting this circuit with rhythmic activities can improve motor sequencing. Challenge: Dysregulation may manifest as clumsy or repetitive movements.

Co-Activation – Related terms: Muscle synergy, joint stability. Simultaneous contraction of agonist and antagonist muscles to stabilize a joint. Example: Quadriceps and hamstrings co-activate during a squat. Application: Therapists cue co-activation to enhance safe weight-bearing. Challenge: Excessive co-activation can limit fluidity of movement.

Core Stability – Related terms: Trunk control, postural foundation. The ability of the lumbar and abdominal musculature to maintain a stable torso during dynamic tasks. Example: Maintaining a neutral pelvis while reaching forward. Application: Core-strengthening exercises support complex motor plans. Challenge: Sensory overload can disrupt core engagement.

Cross-Modal Integration – Related terms: Multisensory processing, sensory discrimination. The brain's capacity to combine information from different sensory modalities into a unified perception. Example: Coordinating visual and proprioceptive cues when catching a ball. Application: Therapy activities that pair

auditory and tactile input enhance integration. Challenge: Autistic individuals may show weak cross-modal links, affecting timing.

Developmental Coordination Disorder (DCD) – Related terms: Dyspraxia, motor planning deficits. A neurodevelopmental condition characterized by poor coordination and difficulty executing smooth movements. Example: Struggling with buttoning a shirt. Application: Movement-therapy assessments differentiate DCD from sensory-modulation issues. Challenge: Comorbidity with autism complicates diagnosis.

Dynamic Posturography – Related terms: Balance assessment, sensory-motor testing. Instrumented evaluation of a person's ability to maintain balance under varying sensory conditions. Example: Sway-meter testing on a foam surface. Application: Provides objective data to guide sensory-integration interventions. Challenge: Limited accessibility in many clinical settings.

Efferent Pathways – Related terms: Motor output, corticospinal tract. Neural routes that transmit motor commands from the brain to peripheral muscles. Example: Corticospinal fibers controlling hand grasp. Application: Understanding efferent integrity informs motor-planning strategies. Challenge: Disrupted efferent signaling can mask sensory-integration progress.

Equilibrioception – Related terms: Vestibular sense, balance perception. The sense of body position and movement in space, primarily mediated by the vestibular apparatus. Example: Detecting head tilt during a turn. Application: Vestibular-rich activities (e.G., Rolling) enhance spatial awareness. Challenge: Hyper- or hypo-responsive vestibular systems affect motor sequencing.

Feedforward Control – Related terms: Anticipatory adjustments, motor planning. The brain's prediction of required muscle activity before movement execution. Example: Pre-activating arm muscles before reaching for a cup. Application: Therapists train feedforward mechanisms through repetitive, goal-directed tasks. Challenge: Impaired feedforward leads to clumsy, corrective movements.

Fidget Toys – Related terms: Sensory modulation, self-regulation. Small handheld objects that provide tactile or proprioceptive input to aid concentration. Example: A textured silicone stress ball. Application: Incorporated in sessions to maintain optimal arousal levels. Challenge: Overuse may interfere with active motor practice.

Gait Analysis – Related terms: Locomotion assessment, kinematics. Systematic observation or instrumented measurement of walking patterns. Example: Identifying excessive forefoot pronation. Application: Informs individualized motor-planning interventions for ambulation. Challenge: Sensory sensitivities may alter natural gait during assessment.

Gross Motor Skills – Related terms: Large-muscle movements, functional mobility. Tasks involving major muscle groups such as walking, jumping, and climbing. Example: Navigating stairs independently. Application: Therapy sessions prioritize gross motor milestones alongside sensory integration. Challenge: Sensory overload can inhibit participation in gross-motor activities.

Ground Reaction Force – Related terms: Biomechanics, force plate. The force exerted by the ground on a

body in contact with it. Example: Peak vertical force during a jump. Application: Monitoring forces helps adjust impact-related sensory inputs. Challenge: Excessive force may exacerbate tactile defensiveness.

Haptic Feedback – Related terms: Tactile perception, proprioception. Information received through touch and pressure that informs the brain about object properties or body position. Example: Feeling the texture of a fabric while dressing. Application: Therapists use textured surfaces to refine haptic discrimination. Challenge: Hypersensitivity can cause avoidance of tactile exploration.

Interoception – Related terms: Body awareness, autonomic regulation. The sense of internal physiological states such as hunger, thirst, and temperature. Example: Recognizing a racing heart before a stressful task. Application: Interoceptive training supports self-regulation during motor learning. Challenge: Deficits may lead to poor pacing of activity.

Joint Proprioception – Related terms: Kinesthetic sense, joint position sense. The ability to sense the position and movement of a joint without visual input. Example: Sensing knee angle while squatting. Application: Proprioceptive drills improve accuracy of motor plans. Challenge: Reduced joint proprioception can cause over-reliance on visual cues.

Kinesiology Tape – Related terms: Cutaneous stimulation, supportive taping. Elastic adhesive strips applied to skin to provide sensory input and mild support. Example: Tape applied along the forearm to enhance awareness during writing. Application: Used as a low-profile cue for motor sequencing. Challenge: Skin sensitivities may limit use.

Motor Cortex – Related terms: Primary motor area, voluntary movement. Brain region responsible for planning and executing voluntary motor commands. Example: Activation of the hand area during a grasp. Application: Targeted activities stimulate cortical plasticity. Challenge: Atypical cortical activation patterns can impede skill acquisition.

Motor Learning – Related terms: Skill acquisition, practice effects. The process by which movement patterns become more efficient with experience. Example: Improved accuracy in throwing after repeated trials. Application: Structured repetition with sensory cues accelerates learning. Challenge: Inconsistent reinforcement may lead to plateau.

Motor Planning – Related terms: Praxis, sequencing. The cognitive process of organizing and sequencing movements to achieve a goal. Example: Planning the steps to tie shoelaces. Application: Therapists break tasks into discrete motor plans with visual supports. Challenge: Deficits manifest as “dyspraxia” and may be mistaken for sensory avoidance.

Neuromodulation – Related terms: Neuroplasticity, sensory gating. The alteration of neuronal activity through external stimuli or pharmacological agents. Example: Rhythmic auditory stimulation to facilitate gait. Application: Combining neuromodulatory techniques with movement therapy to boost integration. Challenge: Individual variability in response requires careful monitoring.

Orthotic Devices – Related terms: Splints, supportive gear. Custom or off-the-shelf appliances that assist joint alignment and movement control. Example: Ankle-foot orthosis for foot drop. Application: Orthotics

can provide proprioceptive feedback during walking. Challenge: Discomfort may increase sensory defensiveness.

Paradoxical Reflex – Related terms: Reflex inhibition, motor response. A reflex that produces an opposite response to the expected one, often seen in neurological disorders. Example: Unexpected flexor response when extending the arm. Application: Recognizing paradoxical reflexes helps adjust therapeutic cues. Challenge: Can confuse motor-planning assessments.

Patterned Sensory Input – Related terms: Rhythmic stimulation, predictable cues. Repetitive, organized sensory experiences that facilitate neural organization. Example: Metronome beats during a marching activity. Application: Patterned input supports timing in motor plans. Challenge: Over-patterning may reduce adaptability.

Perceptual-Motor Integration – Related terms: Sensory-motor coupling, functional movement. The seamless coordination of sensory information with motor output to perform purposeful actions. Example: Adjusting hand grip based on object texture. Application: Therapy tasks that require simultaneous perception and action strengthen this integration. Challenge: Deficits lead to disjointed or unsafe movements.

Phasic Muscle Activity – Related terms: Burst contraction, dynamic movement. Short, rapid muscle activation used for quick, forceful actions. Example: Calf muscle burst during a jump. Application: Training phasic activity enhances explosive motor skills. Challenge: Sensory overload can suppress phasic recruitment.

Postural Tone – Related terms: Muscle tone, resting posture. The baseline level of muscle tension that supports posture and readiness for movement. Example: Mild cervical tone while seated. Application: Tone-modulating activities (e.G., Deep pressure) help achieve optimal postural tone. Challenge: Hypertonicity may limit range of motion.

Proprioceptive Neuromuscular Facilitation (PNF) – Related terms: Facilitation techniques, stretching patterns. A set of therapeutic movement patterns that enhance neuromuscular control and proprioception. Example: Contract-relax stretch for hamstrings. Application: PNF sequences teach coordinated motor plans. Challenge: Intense pressure may be aversive for sensory-sensitive clients.

Receptive Language – Related terms: Auditory processing, comprehension. The ability to understand spoken or written information. Example: Following multi-step verbal instructions. Application: Clear receptive language supports motor-planning instructions. Challenge: Language processing delays can compound motor deficits.

Reflex Inhibition – Related terms: Neuromodulation, reciprocal inhibition. The process by which a reflexive response is suppressed to allow voluntary movement. Example: Inhibiting the stretch reflex during a controlled descent. Application: Therapists teach clients to consciously override inappropriate reflexes. Challenge: Persistent reflexes may interfere with fluid movement.

Rhythmic Auditory Stimulation (RAS) – Related terms: Gait training, tempo cues. Use of auditory beats to guide movement timing and improve coordination. Example: Marching to a 120-bpm metronome. Application: RAS can normalize stride length in autistic walkers. Challenge: Auditory hypersensitivity may

limit effectiveness.

Sensory Discrimination – Related terms: Sensory acuity, perceptual thresholds. The capacity to detect differences in sensory input (e.G., Texture, intensity). Example: Distinguishing between sandpaper grits. Application: Discrimination drills sharpen sensory feedback for motor planning. Challenge: Deficits may lead to over-generalization of sensory experiences.

Sensory Modulation – Related terms: Arousal regulation, sensory thresholds. The ability to regulate responses to sensory input to stay within an optimal functional window. Example: Seeking deep pressure to calm during a noisy environment. Application: Modulation strategies are paired with motor tasks to maintain engagement. Challenge: Dysregulation can cause abrupt cessation of movement practice.

Sensory Processing Disorder (SPD) – Related terms: Sensory integration dysfunction, hypo-/hyper-responsivity. A condition where the brain has difficulty receiving and responding to sensory information. Example: Avoiding brushing because of tactile defensiveness. Application: Assessment informs individualized sensory-integration plans. Challenge: Overlapping symptoms with autism require careful differential diagnosis.

Sensory-Motor Loop – Related terms: Feedback cycle, integration pathway. The continuous exchange of information between sensory receptors and motor effectors during movement. Example: Adjusting foot placement based on proprioceptive feedback while walking. Application: Therapy emphasizes closed-loop activities to enhance loop efficiency. Challenge: Broken loops result in delayed corrective actions.

Serial Position Effect – Related terms: Memory ordering, task sequencing. The tendency to recall items at the beginning and end of a list better than those in the middle. Example: Remembering the first and last steps of a multi-step activity. Application: Structuring motor sequences with salient start/end cues improves retention. Challenge: Middle steps may be omitted, leading to incomplete tasks.

Somatosensory Cortex – Related terms: Primary somatosensory area, tactile map. Brain region that processes tactile, pressure, temperature, and proprioceptive information. Example: Activation when feeling a textured ball. Application: Targeted sensory experiences can strengthen cortical representation. Challenge: Atypical cortical activation may hinder motor-plan formation.

Spasticity – Related terms: Hypertonia, muscle stiffness. Velocity-dependent increase in muscle tone that interferes with smooth movement. Example: Resistance when extending the elbow quickly. Application: Stretching and sensory input can temporarily reduce spasticity during therapy. Challenge: Chronic spasticity limits range for motor planning.

Stereotypy – Related terms: Repetitive behavior, self-stimulatory action. Recurrent, rhythmic movements often performed for sensory regulation. Example: Hand-flapping. Application: Redirecting stereotypies into functional motor tasks can harness sensory input positively. Challenge: Intense stereotypies may disrupt therapeutic focus.

Therapeutic Listening – Related terms: Auditory integration, sensory diet. Use of specially filtered music to modulate auditory processing and arousal. Example: Listening to low-frequency tones during a fine-motor

session. Application: Prepares the nervous system for motor learning. Challenge: Individual auditory preferences vary widely.

Timing Cue – Related terms: Metronome, temporal scaffolding. External signals that provide rhythm to guide movement onset and duration. Example: A beep signaling when to lift a leg. Application: Timing cues improve sequencing in complex motor tasks. Challenge: Over-reliance may impede internal timing development.

Top-Down Processing – Related terms: Cognitive control, executive function. The brain's use of prior knowledge and expectations to interpret sensory input. Example: Anticipating the feel of a familiar object before touching it. Application: Therapists leverage top-down strategies to reduce anxiety during new motor challenges. Challenge: Deficits may lead to reliance on bottom-up input, slowing motor planning.

Trunk Rotation – Related terms: Core engagement, axial mobility. Rotational movement of the torso around the vertical axis. Example: Twisting to reach a toy on the opposite side. Application: Trunk rotation drills improve cross-body coordination. Challenge: Limited rotation can restrict functional reach.

Visual-Motor Integration – Related terms: Eye-hand coordination, perceptual-motor skills. The ability to coordinate visual perception with motor output. Example: Catching a ball after tracking its trajectory. Application: Targeted activities link visual cues with hand actions to strengthen integration. Challenge: Visual processing delays can cascade into motor errors.

Vestibular Input – Related terms: Balance, spatial orientation. Sensory information arising from the inner ear that informs the brain about head movement and position. Example: Feeling a change in motion on a balance board. Application: Vestibular-rich activities support postural control and anticipatory planning. Challenge: Hyper- or hypo-responsivity may cause avoidance or over-stimulation.

Weighted Blanket – Related terms: Deep pressure, sensory calming. A blanket filled with weighted material to provide uniform pressure across the body. Example: Using a 10-lb blanket during bedtime to reduce anxiety. Application: Deep-pressure input can lower arousal before motor practice. Challenge: Excessive weight may limit movement or cause discomfort.

Whole-Body Vibration – Related terms: Proprioceptive stimulation, neuromuscular activation. Mechanical oscillations transmitted through the body to stimulate muscle spindles. Example: Standing on a vibration platform for 2 minutes. Application: Improves muscle tone and postural reflexes before functional training. Challenge: Sensory sensitivities may make vibration intolerable.

Yaw Plane Rotation – Related terms: Axial rotation, vestibular axis. Rotation around the vertical axis, often experienced during turning movements. Example: Turning the head to look over the shoulder. Application: Incorporating controlled yaw movements enhances spatial orientation. Challenge: Excessive yaw can provoke vestibular discomfort.

Zone of Proximal Development (ZPD) – Related terms: Scaffolding, developmental theory. The range between what a learner can do independently and what they can achieve with assistance. Example: A child can climb stairs with hand support but not alone. Application: Therapists design tasks within the ZPD to

promote motor skill acquisition. Challenge: Misjudging the ZPD may lead to frustration or under-challenge.

Adaptive Motor Response – Related terms: Functional movement, compensatory strategy. A movement pattern that adjusts to meet environmental demands despite sensory or motor limitations. Example: Using a modified grip to hold a pencil. Application: Encouraging adaptive responses builds functional independence. Challenge: Over-reliance may mask underlying deficits.

Auditory Processing – Related terms: Sound discrimination, language comprehension. The brain's ability to interpret and make sense of auditory information. Example: Distinguishing a teacher's voice from background noise. Application: Auditory processing training supports instruction following in motor tasks. Challenge: Deficits can cause misinterpretation of verbal motor cues.

Biomechanical Modeling – Related terms: Movement analysis, simulation. Computational representation of the musculoskeletal system to predict forces and motions. Example: Using software to model ankle torque during gait. Application: Models help design individualized motor-planning interventions. Challenge: Models require accurate input data, which may be hard to obtain from autistic clients.

Body Schema – Related terms: Internal representation, proprioception. The brain's mental map of the body's position and configuration. Example: Knowing where the hand is without looking. Application: Activities that expand body schema (e.G., Mirror play) improve motor planning. Challenge: Distorted body schema can lead to clumsy or unsafe movements.

Caloric Vestibular Stimulation – Related terms: Vestibular activation, temperature stimulus. Introduction of warm or cool water into the ear canal to provoke vestibular responses. Example: Using a 30 °C water stimulus to elicit nystagmus. Application: Occasionally employed to assess vestibular function before therapy. Challenge: Invasive and may cause discomfort; rarely used clinically.

Centroid of Mass – Related terms: Balance point, center of gravity. The average location of mass distribution within a body segment or whole body. Example: Shifting the centroid forward when leaning to pick up an object. Application: Teaching clients to control centroid improves stability during movement. Challenge: Sensory deficits may impair accurate perception of centroid shifts.

Co-ordination Patterns – Related terms: Movement sequences, synergies. Repeatedly used combinations of muscle activations that produce efficient movement. Example: The "reach-grasp-release" pattern. Application: Reinforcing optimal patterns speeds up motor learning. Challenge: Atypical patterns may become entrenched without intervention.

Dynamic Visual Acuity – Related terms: Tracking ability, motion perception. The capacity to discern details of moving objects. Example: Reading a sign while walking. Application: Training dynamic acuity enhances safety during locomotion. Challenge: Deficits can lead to missed obstacles.

Electrodermal Activity (EDA) – Related terms: Skin conductance, autonomic arousal. Measurement of sweat gland activity reflecting sympathetic nervous system activation. Example: Increased EDA during a stressful motor task. Application: Biofeedback using EDA helps clients self-regulate arousal before complex movements. Challenge: Equipment sensitivity may be affected by movement artifacts.

Feed-Forward Inhibition – Related terms: Anticipatory control, motor suppression. Neural mechanism that reduces activation of muscles that could interfere with a planned movement. Example: Inhibiting flexor muscles when preparing to extend the arm. Application: Therapists cue feed-forward inhibition to improve movement precision. Challenge: Weak inhibition leads to unwanted co-contractions.

Gross-Motor Integration – Related terms: Whole-body coordination, sensory-motor coupling. The harmonious combination of large-muscle movements with sensory input. Example: Synchronizing arm swing with leg stride while walking. Application: Integrated activities promote fluidity across motor domains. Challenge: Sensory overload can disrupt integration, causing fragmented movement.

Haptic Exploration – Related terms: Tactile investigation, object manipulation. Active use of touch to learn about object properties. Example: Feeling the edges of a puzzle piece before fitting it. Application: Encourages purposeful tactile input to support motor planning. Challenge: Tactile defensiveness may limit exploratory behavior.

Intra-limb Coordination – Related terms: Segmental synergy, joint coupling. Coordination between joints within the same limb to achieve a smooth movement. Example: Coordinated knee and ankle motion during a squat. Application: Drills isolate intra-limb timing to refine motor plans. Challenge: Deficits can result in jerky or inefficient limb movements.

Kinetic Chain – Related terms: Force transmission, segmental interaction. The interconnected series of joints and muscles that transfer forces during movement. Example: The lower-body kinetic chain from hip to foot during running. Application: Addressing chain disruptions improves overall motor efficiency. Challenge: Isolated deficits can cause compensatory patterns elsewhere.

Latency Period – Related terms: Response time, neural delay. The interval between stimulus onset and the initiation of a muscular response. Example: A 150-ms delay before hand closure after seeing a ball. Application: Reducing latency through rapid cueing improves reaction speed. Challenge: Prolonged latency can hinder timely motor execution.

Motor Cortex Plasticity – Related terms: Neuroplasticity, skill remodeling. The brain’s capacity to reorganize motor areas in response to training. Example: Increased activation in the hand area after repetitive grasping tasks. Application: Intensive, sensory-rich practice capitalizes on plasticity for skill acquisition. Challenge: Insufficient repetition may limit plastic changes.

Motor Imagery – Related terms: Mental rehearsal, kinesthetic visualization. The cognitive process of simulating movement without physical execution. Example: Visualizing a step sequence before walking. Application: Mental rehearsal can prime motor circuits, especially when physical practice is limited. Challenge: Requires adequate attention and language comprehension.

Neurodevelopmental Milestones – Related terms: Developmental trajectory, age-appropriate skills. Expected achievements in sensory, motor, and cognitive domains at specific ages. Example: Sitting independently by six months. Application: Milestone tracking guides therapy goal setting. Variation in autism necessitates individualized benchmarks.

Oscillatory Movement – Related terms: Rhythmic motion, sway. Repetitive back-and-forth or side-to-side movements often used for sensory regulation. Example: Rocking in a therapy chair. Application: Controlled oscillations can increase vestibular input before a motor task. Challenge: Excessive rocking may interfere with task focus.

Parietal Lobe – Related terms: Somatosensory processing, spatial awareness. Brain region that integrates sensory information and contributes to body awareness. Example: Activation when locating a hand in space. Application: Targeted sensory activities can enhance parietal functioning. Challenge: Atypical parietal activation may impair spatial aspects of motor planning.

Proprioceptive Weighting – Related terms: Sensory prioritization, tactile dominance. The relative reliance on proprioceptive input compared to other senses for postural control. Example: Increased weighting of joint position cues when standing on a compliant surface. Application: Therapy can adjust weighting through varied sensory challenges. Challenge: Mis-weighting may cause instability.

Repetitive Tactile Stimulation (RTS) – Related terms: Sensory habituation, tactile desensitization. Systematic exposure to repeated tactile input to reduce hypersensitivity. Example: Brushing the forearm with a soft brush for several minutes. Application: RTS can improve tolerance to therapeutic touch. Challenge: Over-stimulation may lead to increased avoidance.

Sensory-Motor Integration Therapy (SMIT) – Related terms: Combined approach, functional movement. A therapeutic model that simultaneously addresses sensory processing and motor skill development. Example: Using a textured ball to practice hand-eye coordination. Application: SMIT aligns with the goals of the Advanced Certificate in Movement Therapy for Autism. Challenge: Requires careful balancing of sensory load and motor demand.

Task Analysis – Related terms: Step breakdown, procedural sequencing. The systematic decomposition of a complex activity into its constituent parts. Example: Breaking “put on a jacket” into five discrete steps. Application: Facilitates targeted motor-planning instruction. Challenge: Overly granular analysis can overwhelm the learner.

Temporal Processing – Related terms: Timing perception, rhythm discrimination. The ability to perceive and predict the timing of events. Example: Anticipating the beat of music before moving. Application: Temporal drills improve synchronization in group activities. Challenge: Deficits may manifest as delayed or premature movements.

Therapeutic Movement Cycle – Related terms: Warm-up, skill acquisition, cool-down. Structured sequence of activities designed to prepare, teach, and consolidate motor skills. Example: Start with deep pressure, progress to functional task, end with calming activity. Application: Provides a predictable framework that supports sensory regulation. Challenge: Rigidity in the cycle may limit spontaneous learning opportunities.

Vestibulo-ocular Reflex (VOR) – Related terms: Gaze stabilization, head-eye coordination. Reflex that stabilizes vision during head movements by producing compensatory eye movements. Example: Maintaining focus on a target while turning the head. Application: VOR training enhances visual tracking during dynamic motor tasks. Challenge: VOR dysfunction can cause blurred vision and affect coordination.

Visual-Spatial Processing – Related terms: Spatial reasoning, map reading. The ability to interpret visual information about the location and relationship of objects. Example: Navigating a classroom layout. Application: Visual-spatial exercises support planning of movement pathways. Challenge: Deficits may result in collisions or missteps.

Weight-Bearing Activities – Related terms: Load-bearing, skeletal loading. Movements that place load on the musculoskeletal system, stimulating proprioceptive feedback. Example: Standing on a therapy ball while performing arm reaches. Application: Enhances joint stability and motor planning for standing tasks. Challenge: Excessive loading can cause fatigue or sensory overload.

Whole-Body Coordination – Related terms: Integrated movement, global motor control. The synchronized use of multiple body segments to perform a functional task. Example: Transitioning from sitting to standing and then walking to a target. Application: Holistic drills promote seamless motor sequences. Challenge: Fragmented sensory input can break coordination.

Yaw-Axis Rotation – Related terms: Transverse plane, head turn. Rotation around the vertical axis, commonly experienced during turning movements. Example: Rotating the torso while looking over the shoulder. Application: Includes controlled yaw drills to improve spatial orientation. Challenge: Vestibular hypersensitivity may limit tolerance.

Z-Score Normalization – Related terms: Statistical comparison, standardized scoring. Method of expressing a value's distance from the mean in standard deviation units. Example: A motor skill score of +1.5 SD above the mean. Application: Helps track progress against normative data. Challenge: Variability in autism may affect the relevance of normative benchmarks.